

Applicant: Steinemann, S.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 1409-2 RCE/CON
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Amendments to the Claims:

Claims 1-10 (canceled)

11. (New) A binary single phase titanium-zirconium alloy suitable for the production of surgical implants, with a zirconium content of less than 25% by weight but more than 5% by weight, comprising 0.1% to 0.3% by weight of oxygen as a strength enhancing additive and not more than 1% by weight of other strength enhancing additives and technical impurities, the alloy being obtainable by a process involving the following steps:

- (i) hot forging said alloy at a temperature above alpha/beta phase transition; and
- (ii) rapidly cooling said alloy to obtain the single phase titanium-zirconium alloy.

12. (New) The titanium-zirconium alloy as claimed in claim 11, wherein the alloy is subsequently cold processed.

13. (New) Titanium-zirconium alloy as claimed in claim 11, wherein the zirconium content is less than 19% by weight (corresponding to 11 atomic %) but more than 10% by weight (corresponding to 5.5 atomic %).

14. (New) Titanium-zirconium alloy as claimed in claim 11, wherein the zirconium content is 14-15% by weight.

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15. (New) A device selected from the group consisting of implants in dental surgery, abutments and elements for suprastructures comprising the titanium-zirconium alloy of claim 11.
16. (New) Process for production of the alloy of claim 11, wherein the forging process is carried out at temperatures above 850°C, the alloy is then cooled rapidly and subsequently cold worked.
17. (New) A surgical implant comprising the titanium-zirconium alloy of claim 11.
18. (New) An implants for dental surgery, abutments and elements for suprastructures as in Claim 17.
19. (New) The titanium-zirconium alloy as in claim 11, wherein the alloy is hot forged and/or cold worked prior to processing into an implant.
20. (New) A process for producing the titanium-zirconium alloy of claim 11 comprising:
 - (a) forging the alloy in the range of alpha/beta phase transition at 770°C to 830°C;
 - (b) cooling the alloy rapidly; and
 - (c) cold working the alloy.
21. (New) The titanium-zirconium alloy as in claim 11, comprising up to 0.5% by weight of hafnium as part of said technical impurities.